

**Community Hospital Emergency Departments Admissions for
Persons Diagnosed with a Mental Illness, Developmental Disability
or Substance Abuse Disorder**

**Third Quarter SFY 2009-2010
(January - March 2010)**

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Executive Summary

This report responds to North Carolina General Statute 112C-147.1.1 Section 10.49(r) which requires the Department of Health and Human Services to report on community hospital emergency department admissions of individuals with mental health, developmental disabilities, and substance abuse diagnoses. This report covers admissions for the third quarter of State Fiscal Year 2009-2010 (January – March 2010).

Between January 1 and March 31, 2010, a total of 1,026,993 emergency department admissions were reported by 111 of the 112 community hospitals in the state. Of this number, 33,211 (3.2%) admissions had a primary diagnosis of a mental health, developmental disabilities, or substance abuse disorder. A total of 140,236 (13.7%) admissions had a primary or co-occurring diagnosis of a mental health, developmental disabilities, or substance abuse disorder.

- Of the admissions with a primary MH/DD/SA diagnosis, 71.4% (23,701) had a mental health diagnosis, 3.4% (1,122) had a developmental disabilities diagnosis, and 25.3% (8,388) had a substance abuse diagnosis.
- The number of admissions with a primary MH/DD/SA diagnosis were almost evenly split between females (16,714) and males (16,497). However, gender differences in admissions were observed across the three disability groups. A higher percentage of females (81.4%) had a mental health primary diagnosis than was the case for males (61.2%). A higher percentage of males (34.4%) had a substance abuse primary diagnosis than was the case for females (16.3%). The percentage of females and males with a primary diagnosis of developmental disabilities was 2.4% and 4.4% respectively.
- Most emergency department admissions for individuals with a primary MH/DD/SA diagnosis involved adults -- 89.1% (29,578) were adults and 10.9% (3,633) were children. Differences related to the primary diagnosis were noted for these two age groups. A higher percentage of child admissions (18.3%) had a primary diagnosis of developmental disabilities than was the case for adults (1.5%), while a higher percentage of adult admissions (27.5%) had a primary diagnosis of substance abuse than was the case for children (6.6%). The percentage of admissions with a mental health related primary diagnosis was about the same for children (75.1%) and adults (70.9%).
- There was a wide variation in emergency department admission rates for individuals with a primary or co-occurring MH/DD/SA diagnosis across the state's Local Management Entities (LMEs). For mental health diagnoses, admission rates across LMEs ranged from 49.6 to 224.8 (average = 108.0) admissions per 10,000 population. For developmental disabilities diagnoses, admission rates across LMEs ranged from 2.2 to 16.7 (average = 9.0) admissions per 10,000 population, and for substance abuse diagnoses, admission rates across LMEs ranged from 15.7 to 57.6 (average = 32.3) admissions per 10,000 population.
- There was also considerable variation in emergency department admission rates across counties ranging from 35.1 to 339.3 (average = 149.2) admissions per 10,000 population for individuals with a primary or co-occurring MH/DD/SA diagnosis.
- Disposition data for admissions with a primary or co-occurring MH/DD/SA diagnosis indicate that almost three-fifths (58.3%) of emergency department admissions were discharged from the emergency department, one-third (32.9%) of admissions were admitted to a hospital (ICU, Psych Unit, or general admission), 5.7% were transferred, and the remaining 3.1% had another disposition (e.g. left AMA or without advice, died, other, or unknown).

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Introduction

This report focuses on community hospital emergency department admissions diagnosed with a mental health, developmental disabilities, or substance abuse disorder. The report is in response to General Statute 112C-147.1.1 Section 10.49(r).

The data in this report covers the period January 1 – March 31, 2010 (the 3rd quarter of State Fiscal Year 2009-2010) reported by 111 of the 112 community hospitals across the state. These hospitals are listed in Appendix A.

Admissions and disposition data were recorded with the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). General information on this tool can be found in Appendix B. ICD-9 codes were used to identify primary and co-occurring diagnoses for mental health, developmental disabilities, and substance abuse disorders. These codes are listed in Appendix C. The International Statistical Classification of Diseases and Related Health Problems (most commonly known by the abbreviation ICD) provides codes to classify diseases and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease.

NC-DETECT data from the hospitals was compiled into a centralized database, and selected parts of it were extracted, aggregated, and sent to the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS) for this report, through a data sharing agreement with the Division of Public Health.

The aggregate data included the total number of admissions as well as the number of admissions diagnosed with a mental health, developmental disabilities, and/or substance abuse disorder. The latter included primary and co-occurring ICD-9 diagnostic codes, recorded at the time of admission, using the NHAMCS 2005 Emergency Department Data Summary classification system.

The aggregate data included the following basic demographic information on admissions: 1) whether the admission was a child (under age 18) or an adult (age 18 and over); 2) whether the admission was a female or a male; 3) county of residence; and 4) the Local Management Entity (LME) service area in which the admission occurred.

CAUTION: In order to comply with HIPAA privacy protection protocols, NC DETECT has redacted data from cells that contain counts of 10 or less. This primarily affects the LME and county level data displayed in this report. The values in tables that have had data redacted have been replaced with an asterisk (*).

Due to data redaction and missing data elements in some records in the NC DETECT data (e.g. unable to identify consumer's county or LME, disposition not provided), totals for LME and county level data tables will not equal totals in the statewide section of this report, and total dispositions will not equal total admissions.

To avoid confusion and to facilitate comparison with state averages, "Statewide" numbers below LME and county data tables in this report represent actual *statewide* summary data (as this data is most complete), not necessarily the total of the numbers in the table above.

Statewide MH/DD/SA Admissions

From January 1 to March 31, 2010, 1,026,993 admissions were reported by emergency departments in North Carolina community hospitals. Of this number, 33,211 (3.2%) had a **primary diagnosis** of a mental health, developmental disabilities, or substance abuse disorder. A total of 140,236 (13.7%) admissions had a **primary or co-occurring diagnosis** of a mental health, developmental disabilities, or substance abuse disorder.

Figure 1 shows the distribution of admissions by diagnostic group for admissions with a primary diagnosis of mental health, developmental disabilities, or substance abuse. The data shows that 71.4 % (23,701) of admissions with a primary MH/DD/SA diagnosis had a mental health diagnosis, 3.4% (1,122) had a developmental disabilities diagnosis, and 25.3 % (8,388) had a substance abuse diagnosis.

**Figure 1: Admissions By Diagnostic Group
For Primary MH/DD/SA Admissions**

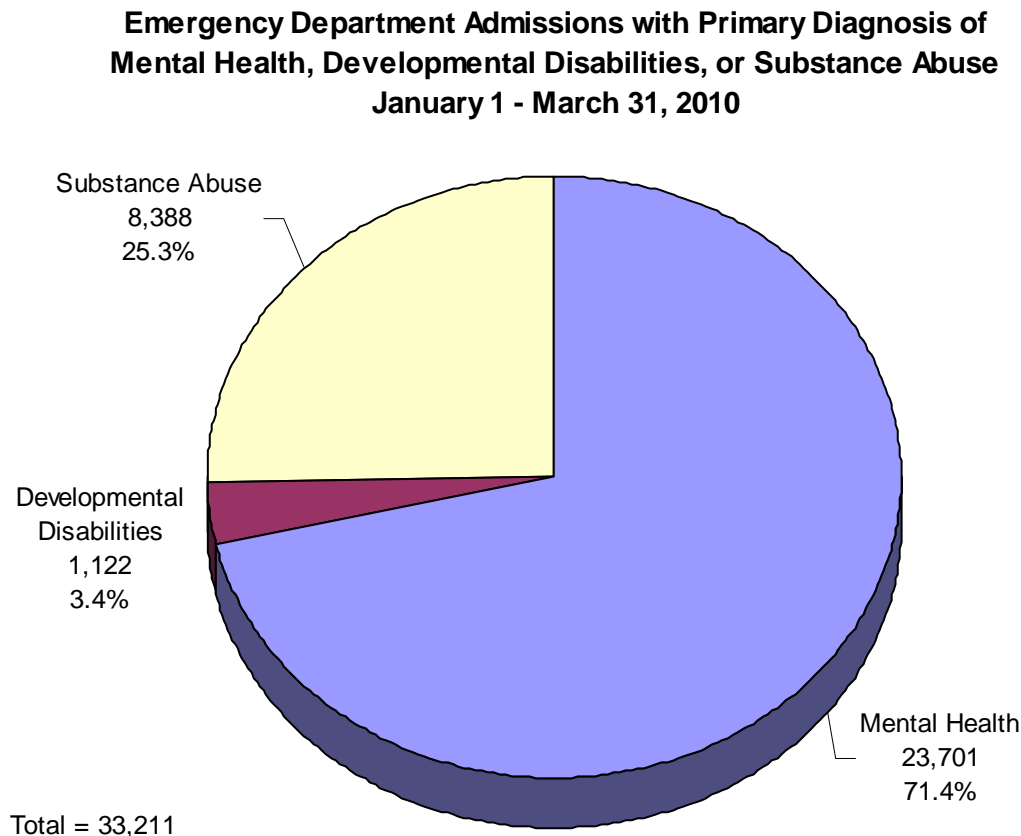


Figure 2 shows the distribution of admissions by gender and diagnostic group for admissions with a primary diagnosis of a mental health, developmental disabilities, or substance abuse disorder. Overall, those admissions were almost evenly split between females (16,714) and males (16,497). However, there were gender differences in admissions across the three diagnostic groups. For example, a higher percentage of females (81.4%) had a mental health primary diagnosis than males (61.2%). Alternatively, a higher percentage of males (34.4%) had a substance abuse primary diagnosis than females (16.3%). The percentage of females (2.4%) and males (4.4%) with a primary diagnosis of developmental disabilities were closer together with males being slightly higher.

**Figure 2: Admissions By Gender And Diagnostic Group
For Primary MH/DD/SA Admissions**

**Emergency Department Admissions with Primary Diagnosis of
Mental Health, Developmental Disabilities, or Substance Abuse
January 1 - March 31, 2010**

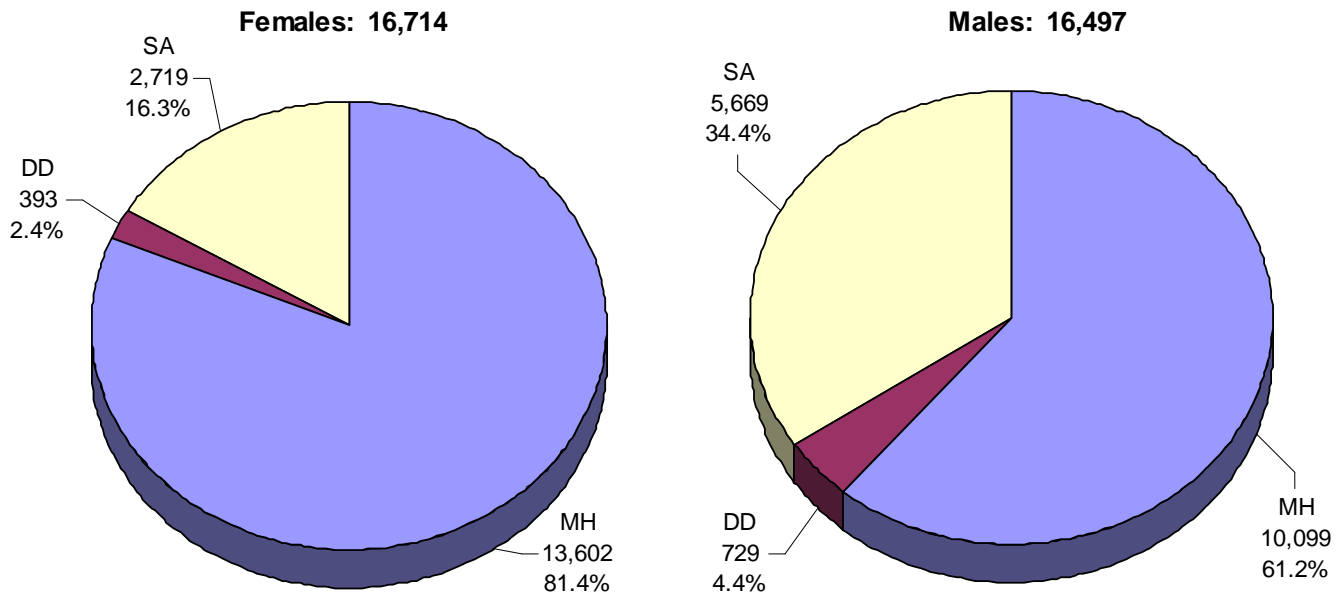
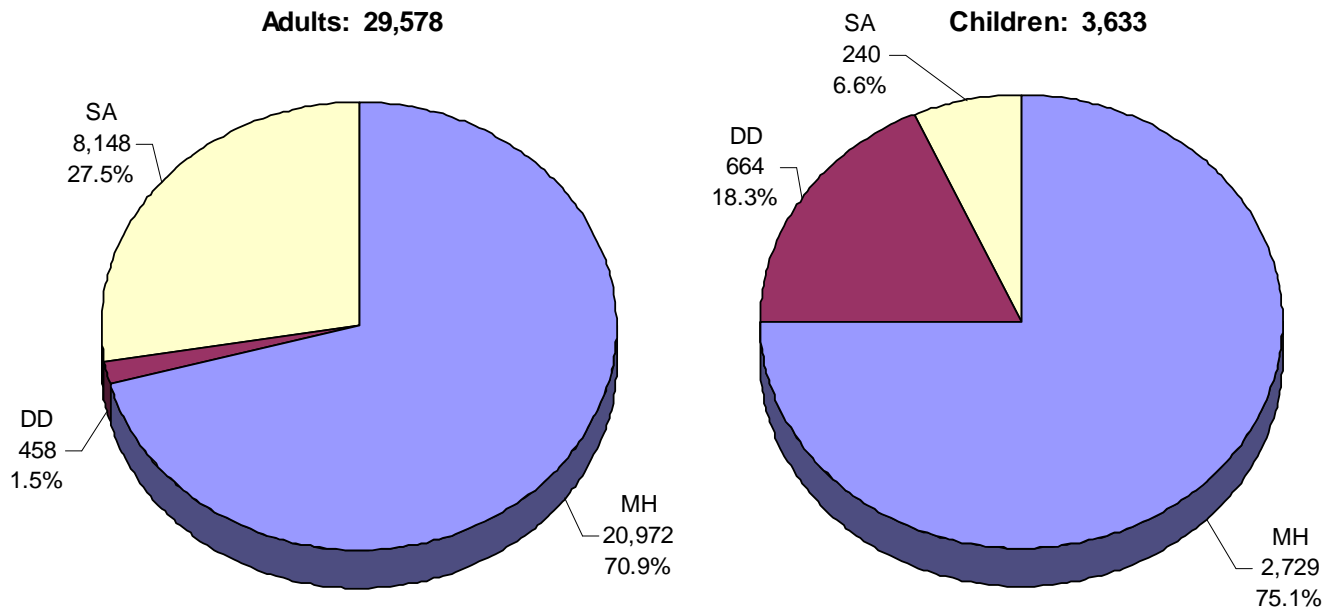


Figure 3 shows the distribution of admissions for children and adults by diagnostic group for admissions with a primary diagnosis of a mental health, developmental disabilities, or substance abuse disorder. Overall, 10.9% (3,633) were children and 89.1% (29,578) were adults. The data shows differences in the primary diagnosis for children and adults. A higher percentage of child admissions (18.3%) had a primary diagnosis of developmental disabilities than adults (1.5%) while a higher percentage of adult admissions (27.5%) had a primary diagnosis of substance abuse than children (6.6%). The percentage of admissions with a mental health related primary diagnosis was similar for children (75.1%) and adults (70.9%).

**Figure 3: Admissions By Age And Diagnostic Group
For Primary MH/DD/SA Admissions**

**Emergency Department Admissions with Primary Diagnosis of
Mental Health, Developmental Disabilities, or Substance Abuse
January 1 - March 31, 2010**



MH/DD/SA Admissions By LME

Tables 1 through 3 present data on emergency department admissions for each Local Management Entity's (LME) service area on (1) the number of admissions with a **primary diagnosis** of a mental health, developmental disabilities, or substance abuse disorder, (2) the number of admissions with **any diagnosis** (primary or co-occurring diagnosis) of a mental health, developmental disabilities, or substance abuse disorder for any of the up to 11 diagnoses reported to NC DETECT, and (3) the number of admissions for **all causes**. The data in these three tables are sorted alphabetically by LME name.

The first two tables show for each LME the number of admissions that occurred during the quarter by diagnostic group (mental health, developmental disabilities, or substance abuse) and age group (child and adult). Please note that due to the low number of admissions for some age and diagnostic groups, the data in some cells in the first two tables has been redacted for privacy protection purposes.

The third table compares the total number of admissions for all causes with the total number and percentage of admissions with a primary diagnosis, and the total number and percentage of admissions with any diagnosis (primary or co-occurring) of a mental health, developmental disabilities, and substance abuse disorder.

In the third table, the percent of total admissions (for all causes) involving a **primary diagnosis** of MH/DD/SA ranged from a low of 1.5% to a high of 5.9%. The average percent was 3.2%. The percent of total admissions (for all causes) involving **any diagnosis** of MH/DD/SA (primary or co-occurring) ranged from a low of 7.2% to a high of 20.3%. The average percent was 13.7%.

Tables 4 through 6 present data on **admission rates per 10,000 population** for each LME for emergency department admissions with **any diagnosis** (primary or co-occurring) of a mental health, developmental disabilities, or substance abuse disorder for any of the up to 11 diagnoses reported to NC DETECT.

These tables show population estimates for each LME at the beginning of the state fiscal year, the number of admissions that occurred during the quarter, and the admission rate (number of admissions per 10,000 population) for individuals with any diagnosis (primary or co-occurring) related to mental health, developmental disabilities, or substance abuse disorders.

The data in these three tables are sorted by admission rate (highest to lowest). There was considerable variation in admission rates across the LMEs. For **mental health** diagnoses, admission rates ranged from 49.6 to 224.8 admissions per 10,000 population. The average rate was 108.0 admissions per 10,000 population. For **developmental disabilities** diagnoses, admission rates ranged from 2.2 to 16.7 admissions per 10,000 population. The average rate was 9.0 admissions per 10,000 population. For **substance abuse** diagnoses, admission rates ranged from 15.7 to 57.6 admissions per 10,000 population. The average rate was 32.3 admissions per 10,000 population.

Table 1 displays data for each LME's service area on the number of adult and child admissions with a primary diagnosis of a mental health, developmental disabilities, or substance abuse disorder.

**Table 1: Adult And Child Admissions With A Primary Diagnosis Of
Mental Health, Developmental Disabilities Or Substance Abuse
By Local Management Entity (LME)
January 1 - March 31, 2010**

LME	Mental Health			Developmental Disabilities			Substance Abuse			Grand Total
	Adult	Child	Total	Adult	Child	Total	Adult	Child	Total	
Alamance-Caswell ¹	668	80	748	11	13	24	263	*	263	1,035
Albemarle	612	63	675	*	46	46	172	*	172	893
Beacon Center	641	76	717	11	12	23	249	*	249	989
CenterPoint ¹	1,062	162	1,224	*	15	15	440	13	453	1,692
Crossroads	472	56	528	*	*	*	158	*	158	686
Cumberland	920	186	1,106	15	30	45	348	*	348	1,499
Durham Center	401	91	492	*	14	14	217	*	217	723
East Carolina	1,116	119	1,235	30	38	68	384	*	384	1,687
Eastpointe	432	50	482	*	*	*	86	*	86	568
Five County	435	35	470	*	*	*	137	*	137	607
Guilford Center	1,059	101	1,160	*	*	*	480	*	480	1,640
Johnston	324	51	375	*	*	*	111	*	111	486
Mecklenburg	1,125	163	1,288	*	25	25	752	17	769	2,082
Mental Health Partners	734	85	819	*	13	13	326	*	326	1,158
Onslow-Carteret	332	57	389	*	*	*	146	*	146	535
O-P-C	360	78	438	*	*	*	202	*	202	640
Pathways	1,237	188	1,425	23	32	55	509	*	509	1,989
Piedmont	1,663	244	1,907	31	48	79	507	11	518	2,504
Sandhills Center	1,602	183	1,785	16	68	84	483	*	483	2,352
Smoky Mountain Center	1,345	153	1,498	*	36	36	534	*	534	2,068
Southeastern Center	793	105	898	18	17	35	392	*	392	1,325
Southeastern Regional	753	78	831	*	14	14	342	*	342	1,187
Wake	701	85	786	13	24	37	321	*	321	1,144
Western Highlands	2,140	238	2,378	97	92	189	570	*	570	3,137
Statewide³	20,972	2,729	23,701	458	664	1,122	8,148	240	8,388	33,211

Notes

1. The data provided does not reflect the change effective July 2009 when Rockingham County moved from Alamance-Caswell-Rockingham to CenterPoint. This will be corrected in future reports.
2. An asterisk (*) indicates the number was 10 or less. The actual number was redacted from the data that was provided for privacy protection reasons.
3. Refer to the CAUTION in the introduction (on page 4).

Table 2 displays data for each LME's service area on the number of adult and child admissions with a primary or co-occurring diagnosis of a mental health, developmental disabilities, or substance abuse disorder for any of the up to 11 diagnoses reported to NC DETECT.

**Table 2: Adult And Child Admissions With A Primary Or Co-Occurring Diagnosis Of
Mental Health, Developmental Disabilities Or Substance Abuse
By Local Management Entity (LME)
January 1 - March 31, 2010**

LME	Mental Health			Developmental Disabilities			Substance Abuse			Grand Total
	Adult	Child	Total	Adult	Child	Total	Adult	Child	Total	
Alamance-Caswell ¹	2,993	233	3,226	139	166	305	1,050	*	1,050	4,581
Albemarle	1,908	133	2,041	92	79	171	507	*	507	2,719
Beacon Center	2,431	166	2,597	120	108	228	909	14	923	3,748
CenterPoint ¹	4,582	293	4,875	228	158	386	1,334	55	1,389	6,650
Crossroads	3,225	225	3,450	118	120	238	732	*	732	4,420
Cumberland	3,222	366	3,588	147	195	342	1,405	25	1,430	5,360
Durham Center	1,335	156	1,491	93	115	208	576	*	576	2,275
East Carolina	5,261	355	5,616	254	228	482	1,613	*	1,613	7,711
Eastpointe	3,461	287	3,748	138	187	325	1,075	31	1,106	5,179
Five County	1,862	108	1,970	52	51	103	732	*	732	2,805
Guilford Center	2,228	145	2,373	64	43	107	1,035	*	1,035	3,515
Johnston	1,473	126	1,599	91	67	158	486	*	486	2,243
Mecklenburg	6,101	333	6,434	382	232	614	2,367	54	2,421	9,469
Mental Health Partners	4,024	240	4,264	126	157	283	1,028	11	1,039	5,586
Onslow-Carteret	3,038	284	3,322	203	172	375	980	14	994	4,691
O-P-C	1,908	165	2,073	121	108	229	718	*	718	3,020
Pathways	8,028	626	8,654	272	371	643	2,048	48	2,096	11,393
Piedmont	6,971	593	7,564	317	358	675	1,813	45	1,858	10,097
Sandhills Center	5,766	388	6,154	205	264	469	1,817	44	1,861	8,484
Smoky Mountain Center	5,257	364	5,621	192	202	394	1,563	11	1,574	7,589
Southeastern Center	3,613	272	3,885	155	130	285	1,292	27	1,319	5,489
Southeastern Regional	3,363	234	3,597	113	153	266	1,443	32	1,475	5,338
Wake	5,331	253	5,584	378	241	619	1,393	17	1,410	7,613
Western Highlands	7,246	382	7,628	331	210	541	1,686	46	1,732	9,901
Statewide³	94,745	6,731	101,476	4,341	4,116	8,457	29,664	659	30,323	140,256

Notes

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2. An asterisk (*) indicates the number was 10 or less. The actual number was redacted from the data that was provided for privacy protection reasons.
3. Refer to the CAUTION in the introduction (on page 4).

Table 3 displays summary data for each LME's service area on the number of admissions for all causes, the number of admissions with a primary diagnosis of a mental health, developmental disabilities, or substance abuse disorder, and the number of admissions with any diagnosis (primary or co-occurring) of a mental health, developmental disabilities, or substance abuse disorder for any of the up to 11 diagnoses reported to NC DETECT.

**Table 3: Emergency Department Admissions By Diagnostic Group
By Local Management Entity (LME)
January 1 - March 31, 2010**

LME	All Causes	Primary Diagnosis of MH/DD/SA		Any Diagnosis of MH/DD/SA	
Alamance-Caswell ¹	30,784	1,035	3.4%	4,581	14.9%
Albemarle	18,732	893	4.8%	2,719	14.5%
Beacon Center	35,579	989	2.8%	3,748	10.5%
CenterPoint ¹	45,852	1,692	3.7%	6,650	14.5%
Crossroads	32,416	686	2.1%	4,420	13.6%
Cumberland	32,184	1,499	4.7%	5,360	16.7%
Durham Center	27,772	723	2.6%	2,275	8.2%
East Carolina	56,427	1,687	3.0%	7,711	13.7%
Eastpointe	38,103	568	1.5%	5,179	13.6%
Five County	31,484	607	1.9%	2,805	8.9%
Guilford Center	48,910	1,640	3.4%	3,515	7.2%
Johnston	18,777	486	2.6%	2,243	11.9%
Mecklenburg	86,759	2,082	2.4%	9,469	10.9%
Mental Health Partners	30,761	1,158	3.8%	5,586	18.2%
Onslow-Carteret	23,175	535	2.3%	4,691	20.2%
O-P-C	17,096	640	3.7%	3,020	17.7%
Pathways	56,084	1,989	3.5%	11,393	20.3%
Piedmont	76,035	2,504	3.3%	10,097	13.3%
Sandhills Center	66,643	2,352	3.5%	8,484	12.7%
Smoky Mountain Center	59,424	2,068	3.5%	7,589	12.8%
Southeastern Center	35,250	1,325	3.8%	5,489	15.6%
Southeastern Regional	43,702	1,187	2.7%	5,338	12.2%
Wake	69,341	1,144	1.6%	7,613	11.0%
Western Highlands	52,901	3,137	5.9%	9,901	18.7%
Statewide²	1,026,993	33,211	3.2%	140,256	13.7%

Notes

1. The data provided does not reflect the change effective July 2009 when Rockingham County moved from Alamance-Caswell-Rockingham to CenterPoint. This will be corrected in future reports.
2. Refer to the CAUTION in the introduction (on page 4).

Table 4 displays data for each LME's service area on admission rates per 10,000 population (sorted highest to lowest) for individuals with a primary or co-occurring mental health diagnosis for any of the up to 11 diagnoses reported to NC DETECT.

**Table 4: Admission Rates For Individuals With Any (Primary Or Co-Occurring) Mental Health Diagnosis, By Local Management Entity
January 1 - March 31, 2010**

LME	Population²	Admissions	Rate Per 10,000 Population
Pathways	384,960	8,654	224.8
Mental Health Partners	247,410	4,264	172.3
Western Highlands	507,121	7,628	150.4
Southeastern Regional	256,296	3,597	140.3
East Carolina	404,274	5,616	138.9
Onslow-Carteret	242,062	3,322	137.2
Crossroads	270,755	3,450	127.4
Eastpointe	294,211	3,748	127.4
Alamance-Caswell ¹	264,621	3,226	121.9
Sandhills Center	547,102	6,154	112.5
Cumberland	319,883	3,588	112.2
Albemarle	182,541	2,041	111.8
CenterPoint ¹	438,266	4,875	111.2
Southeastern Center	355,050	3,885	109.4
Smoky Mountain Center	522,576	5,621	107.6
Beacon Center	248,084	2,597	104.7
Piedmont	739,735	7,564	102.3
Johnston	168,825	1,599	94.7
O-P-C	231,244	2,073	89.6
Five County	234,180	1,970	84.1
Mecklenburg	894,219	6,434	72.0
Wake	900,342	5,584	62.0
Durham Center	267,492	1,491	55.7
Guilford Center	476,831	2,373	49.8
Statewide³	9,398,080	101,476	108.0

Notes

1. The data provided does not reflect the change effective July 2009 when Rockingham County moved from Alamance-Caswell-Rockingham to CenterPoint. This will be corrected in future reports.
2. Source: July 2009 Projected Population, NC Office of State Budget and Management (OSBM), State Demographics Branch website: http://www.osbm.state.nc.us/demog/countytotals_singleage_2009.html. Last Update: April 24, 2009. Downloaded 7/31/09.
3. Refer to the CAUTION in the introduction (on page 4).

Table 5 displays data for each LME's service area on admission rates per 10,000 population (sorted highest to lowest) for individuals with a primary or co-occurring developmental disabilities diagnosis for any of the up to 11 diagnoses reported to NC DETECT.

**Table 5: Admission Rates For Individuals With Any (Primary Or Co-Occurring) Developmental Disabilities Diagnosis, By Local Management Entity
January 1 - March 31, 2010**

LME	Population²	Admissions	Rate Per 10,000 Population
Pathways	384,960	643	16.7
Onslow-Carteret	242,062	375	15.5
East Carolina	404,274	482	11.9
Alamance-Caswell ¹	264,621	305	11.5
Mental Health Partners	247,410	283	11.4
Eastpointe	294,211	325	11.0
Cumberland	319,883	342	10.7
Western Highlands	507,121	541	10.7
Southeastern Regional	256,296	266	10.4
O-P-C	231,244	229	9.9
Albemarle	182,541	171	9.4
Johnston	168,825	158	9.4
Beacon Center	248,084	228	9.2
Piedmont	739,735	675	9.1
CenterPoint ¹	438,266	386	8.8
Crossroads	270,755	238	8.8
Sandhills Center	547,102	469	8.6
Southeastern Center	355,050	285	8.0
Durham Center	267,492	208	7.8
Smoky Mountain Center	522,576	394	7.5
Wake	900,342	619	6.9
Mecklenburg	894,219	614	6.9
Five County	234,180	103	4.4
Guilford Center	476,831	107	2.2
Statewide³	9,398,080	8,457	9.0

Notes

1. The data provided does not reflect the change effective July 2009 when Rockingham County moved from Alamance-Caswell-Rockingham to CenterPoint. This will be corrected in future reports.
2. Source: July 2009 Projected Population, NC Office of State Budget and Management (OSBM), State Demographics Branch website: http://www.osbm.state.nc.us/demog/countytotals_singleage_2009.html. Last Update: April 24, 2009. Downloaded 7/31/09.
3. Refer to the CAUTION in the introduction (on page 4).

Table 6 displays data for each LME's service area on admission rates per 10,000 population (sorted highest to lowest) for individuals with a primary or co-occurring substance abuse diagnosis for any of the up to 11 diagnoses reported to NC DETECT.

**Table 6: Admission Rates For Individuals With Any (Primary or Co-Occurring) Substance Abuse Diagnosis, By Local Management Entity
January 1 - March 31, 2010**

LME	Population²	Admissions	Rate Per 10,000 Population
Southeastern Regional	256,296	1,475	57.6
Pathways	384,960	2,096	54.4
Cumberland	319,883	1,430	44.7
Mental Health Partners	247,410	1,039	42.0
Onslow-Carteret	242,062	994	41.1
East Carolina	404,274	1,613	39.9
Alamance-Caswell ¹	264,621	1,050	39.7
Eastpointe	294,211	1,106	37.6
Beacon Center	248,084	923	37.2
Southeastern Center	355,050	1,319	37.1
Western Highlands	507,121	1,732	34.2
Sandhills Center	547,102	1,861	34.0
CenterPoint ¹	438,266	1,389	31.7
Five County	234,180	732	31.3
O-P-C	231,244	718	31.0
Smoky Mountain Center	522,576	1,574	30.1
Johnston	168,825	486	28.8
Albemarle	182,541	507	27.8
Mecklenburg	894,219	2,421	27.1
Crossroads	270,755	732	27.0
Piedmont	739,735	1,858	25.1
Guilford Center	476,831	1,035	21.7
Durham Center	267,492	576	21.5
Wake	900,342	1,410	15.7
Statewide³	9,398,080	30,323	32.3

Notes

1. The data provided does not reflect the change effective July 2009 when Rockingham County moved from Alamance-Caswell-Rockingham to CenterPoint. This will be corrected in future reports.
2. Source: July 2009 Projected Population, NC Office of State Budget and Management (OSBM), State Demographics Branch website: http://www.osbm.state.nc.us/demog/countytotals_singleage_2009.html. Last Update: April 24, 2009. Downloaded 7/31/09.
3. Refer to the CAUTION in the introduction (on page 4).

MH/DD/SA Admissions By County

Table 7 presents data on emergency department admissions and admission rates by county for individuals with a diagnosis of a mental health, developmental disabilities, or substance abuse disorder. The data in this table is sorted alphabetically by county.

This table shows for each county population estimates at the beginning of the state fiscal year, the number of admissions that occurred during the quarter, and the admission rate per 10,000 population for individuals with a primary diagnosis of a mental health, developmental disabilities, or substance abuse disorder and for individuals with any diagnosis (primary or co-occurring) related to a mental health, developmental disabilities, or substance abuse disorder.

There was considerable variation in admission rates across counties for both groups.

County admission rates for individuals with a **primary diagnosis** related to mental health, developmental disabilities, or substance abuse ranged from 8.4 to 86.5 admissions per 10,000 population. The average for this group was 35.3 admissions per 10,000 population.

County admission rates for individuals with **any diagnosis** (primary or co-occurring) related to mental health, developmental disabilities, or substance abuse ranged from 35.1 to 339.3 admissions per 10,000 population. The average for this group was 149.2 admissions per 10,000 population.

**Table 7: Admission Rates By County
For Admissions With A MH/DD/SA Diagnosis
January 1 - March 31, 2010**

County	Population ¹	Admissions With Primary MH/DD/SA Diagnosis		Admissions With Any MH/DD/SA Diagnosis	
		Number of Admissions	Admissions Per 10,000 Population	Number of Admissions	Admissions Per 10,000 Population
Alamance	149,401	651	43.6	2,794	187.0
Alexander	37,306	150	40.2	584	156.5
Alleghany	11,157	41	36.7	101	90.5
Anson	25,324	111	43.8	441	174.1
Ashe	26,488	84	31.7	238	89.9
Avery	18,301	53	29.0	149	81.4
Beaufort	46,654	155	33.2	701	150.3
Bertie	20,111	72	35.8	258	128.3
Bladen	32,213	150	46.6	452	140.3
Brunswick	106,586	372	34.9	1,592	149.4
Buncombe	231,016	1,751	75.8	4,840	209.5
Burke	90,337	424	46.9	1,758	194.6
Cabarrus	177,007	673	38.0	2,899	163.8

*NC Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
Community Hospital Emergency Department Admissions, Third Quarter, SFY 2009-2010*

County	Population ¹	Admissions With Primary MH/DD/SA Diagnosis		Admissions With Any MH/DD/SA Diagnosis	
		Number of Admissions	Admissions Per 10,000 Population	Number of Admissions	Admissions Per 10,000 Population
Caldwell	80,744	359	44.5	1,534	190.0
Camden	9,799	64	65.3	87	88.8
Carteret	63,858	190	29.8	1,842	288.5
Caswell	23,294	47	20.2	177	76.0
Catawba	157,073	739	47.0	3,189	203.0
Chatham	62,471	169	27.1	446	71.4
Cherokee	27,225	108	39.7	318	116.8
Chowan	14,722	58	39.4	255	173.2
Clay	10,576	27	25.5	75	70.9
Cleveland	98,892	705	71.3	3,355	339.3
Columbus	55,076	165	30.0	864	156.9
Craven	98,488	502	51.0	2,662	270.3
Cumberland	319,883	1,494	46.7	4,644	145.2
Currituck	23,334	96	41.1	194	83.1
Dare	33,442	127	38.0	454	135.8
Davidson	160,963	454	28.2	2,097	130.3
Davie	41,685	132	31.7	409	98.1
Duplin	54,005	141	26.1	584	108.1
Durham	267,492	736	27.5	1,995	74.6
Edgecombe	51,599	236	45.7	829	160.7
Forsyth	349,569	1,404	40.2	4,867	139.2
Franklin	58,999	106	18.0	606	102.7
Gaston	209,516	1,012	48.3	5,219	249.1
Gates	11,706	39	33.3	77	65.8
Graham	8,133	12	14.8	90	110.7
Granville	56,620	129	22.8	474	83.7
Greene	21,360	42	19.7	244	114.2
Guilford	476,831	1,655	34.7	3,176	66.6
Halifax	55,135	305	55.3	895	162.3
Harnett	113,001	295	26.1	1,301	115.1
Haywood	57,430	279	48.6	1,145	199.4
Henderson	105,630	376	35.6	1,181	111.8
Hertford	23,679	79	33.4	212	89.5
Hoke	45,602	134	29.4	475	104.2
Hyde	5,485	11	20.1	45	82.0
Iredell	158,396	404	25.5	2,047	129.2

*NC Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
Community Hospital Emergency Department Admissions, Third Quarter, SFY 2009-2010*

County	Population ¹	Admissions With Primary MH/DD/SA Diagnosis		Admissions With Any MH/DD/SA Diagnosis	
		Number of Admissions	Admissions Per 10,000 Population	Number of Admissions	Admissions Per 10,000 Population
Jackson	37,551	101	26.9	351	93.5
Johnston	168,825	498	29.5	1,950	115.5
Jones	10,305	42	40.8	239	231.9
Lee	58,709	416	70.9	755	128.6
Lenoir	57,431	125	21.8	1,010	175.9
Lincoln	76,552	259	33.8	1,568	204.8
Macon	34,847	104	29.8	275	78.9
Madison	21,053	176	83.6	523	248.4
Martin	23,783	58	24.4	472	198.5
McDowell	45,149	290	64.2	886	196.2
Mecklenburg	894,219	2,102	23.5	8,574	95.9
Mitchell	16,044	67	41.8	189	117.8
Montgomery	27,777	130	46.8	400	144.0
Moore	86,905	394	45.3	1,566	180.2
Nash	95,163	363	38.1	952	100.0
New Hanover	194,914	837	42.9	2,829	145.1
Northampton	21,093	92	43.6	349	165.5
Onslow	178,204	358	20.1	2,221	124.6
Orange	131,155	398	30.3	1,468	111.9
Pamlico	12,884	37	28.7	198	153.7
Pasquotank	41,381	358	86.5	715	172.8
Pender	53,550	117	21.8	426	79.6
Perquimans	13,193	84	63.7	182	138.0
Person	37,618	91	24.2	706	187.7
Pitt	159,354	639	40.1	2,156	135.3
Polk	19,009	53	27.9	139	73.1
Randolph	142,871	450	31.5	1,674	117.2
Richmond	46,913	406	86.5	986	210.2
Robeson	131,610	797	60.6	2,870	218.1
Rockingham	91,926	341	37.1	1,069	116.3
Rowan	140,891	643	45.6	1,584	112.4
Rutherford	64,257	422	65.7	1,387	215.9
Sampson	66,461	133	20.0	915	137.7
Scotland	37,397	90	24.1	540	144.4
Stanly	60,268	328	54.4	610	101.2
Stokes	47,012	162	34.5	578	122.9

*NC Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
Community Hospital Emergency Department Admissions, Third Quarter, SFY 2009-2010*

County	Population ¹	Admissions With Primary MH/DD/SA Diagnosis		Admissions With Any MH/DD/SA Diagnosis	
		Number of Admissions	Admissions Per 10,000 Population	Number of Admissions	Admissions Per 10,000 Population
Surry	73,807	208	28.2	1,627	220.4
Swain	14,146	67	47.4	179	126.5
Transylvania	31,358	113	36.0	292	93.1
Tyrrell	4,290	*	*	36	83.9
Union	200,606	378	18.8	1,873	93.4
Vance	43,529	57	13.1	368	84.5
Wake	900,342	1,158	12.9	6,853	76.1
Warren	19,897	25	12.6	149	74.9
Washington	13,112	11	8.4	46	35.1
Watauga	45,901	96	20.9	338	73.6
Wayne	116,314	190	16.3	2,122	182.4
Wilkes	67,622	316	46.7	614	90.8
Wilson	79,962	355	44.4	1,348	168.6
Yadkin	38,552	91	23.6	346	89.7
Yancey	18,754	88	46.9	259	138.1
Statewide³	9,398,080	33,211	35.3	140,256	149.2

Notes

1. Source: July 2009 Projected Population, NC Office of State Budget and Management (OSBM), State Demographics Branch website: http://www.osbm.state.nc.us/demog/countytotals_singleage_2009.html. Last Update: April 24, 2009. Downloaded 7/31/09.
2. An asterisk (*) indicates the number was 10 or less. The actual number was redacted from the data that was provided for privacy protection reasons.
3. Refer to the CAUTION in the introduction (on page 4).

Disposition of MH/DD/SA Admissions

Table 8 presents statewide data on the disposition of emergency department admissions that had a primary or co-occurring diagnosis of a mental health, developmental disabilities, or substance abuse disorder. Almost three-fifths (58.3%) of admissions were treated and discharged from the emergency department, one-third (32.9%) were admitted to a hospital (ICU, Psych Unit, or general admission), 5.7% were transferred (to prison, jail, general hospital, another type of institution, or to home care), and the remaining 3.1% had one of the other dispositions shown in the table below.

**Table 8: Disposition Of Admissions With
Any (Primary Or Co-Occurring) Diagnosis Of MH/DD/SA
January 1 - March 31, 2010**

Disposition	Mental Health		Developmental Disabilities		Substance Abuse		Total MH/DD/SA	
	Number	%	Number	%	Number	%	Number	%
Admitted to ICU	576	0.6%	62	0.8%	283	1.0%	921	0.7%
Admitted to Psych Unit	2,462	2.5%	120	1.5%	1,041	3.6%	3,623	2.7%
Admitted ¹	28,387	29.0%	2,037	25.1%	9,360	32.2%	39,784	29.5%
Observation	918	0.9%	49	0.6%	298	1.0%	1,265	0.9%
Transferred ²	5,826	6.0%	333	4.1%	1,591	5.5%	7,750	5.7%
Discharged	57,653	59.0%	5,450	67.2%	15,590	53.6%	78,693	58.3%
Died	177	0.2%	*	*	39	0.1%	216	0.2%
Left AMA	1013	1.0%	37	0.5%	524	1.8%	1,574	1.2%
Left Without Advice	409	0.4%	12	0.1%	201	0.7%	622	0.5%
Other ³	180	0.2%	*	*	111	0.4%	291	0.2%
Unknown	163	0.2%	12	0.1%	61	0.2%	236	0.2%
Statewide⁵	97,764	100.0%	8,112	100.0%	29,099	100.0%	134,975	100.0%

Notes

1. "Admitted" is a general code that covers any person admitted as an inpatient to any unit of the hospital. It is intended to be used to report admissions to units other than Psych or ICU, which have their own codes; however, it is possible that some emergency departments may be using this code to report all admissions.
2. Includes transfer to prison, jail, general hospital, another type of institution, or to home care.
3. Other category is not clearly defined.
4. An asterisk (*) indicates the number was 10 or less. The actual number was redacted from the data that was provided for privacy protection reasons.
5. Refer to the CAUTION in the introduction (on page 4).

Appendix A: Community Hospitals Reporting Data		
County	Town	Hospital
Alamance	Burlington	Alamance
Alexander	Taylorsville	Frye Alexander
Alleghany	Sparta	Alleghany
Anson	Wadesboro	Anson
Ashe	Jefferson	Ashe
Avery	Linville	Charles A. Cannon
Beaufort	Washington	Beaufort
Beaufort	Belhaven	Pungo
Bertie	Windsor	Bertie
Bladen	Elizabethtown	Bladen
Brunswick	Supply	Brunswick
Brunswick	Southport	Dosher
Buncombe	Asheville	Mission
Burke	Morganton	Grace
Burke	Valdese	Valdese
Cabarrus	Concord	Northeast
Caldwell	Lenoir	Caldwell
Carteret	Morehead City	Carteret
Catawba	Hickory	Catawba Valley
Catawba	Hickory	Frye
Chatham	Siler City	Chatham
Cherokee	Murphy	Murphy
Chowan	Edenton	Chowan
Cleveland	Shelby	Cleveland
Cleveland	Kings Mountain	Kings Mountain
Columbus	Whiteville	Columbus
Craven	New Bern	Craven
Cumberland	Fayetteville	Cape Fear Valley
Dare	Nags Head	Outer Banks
Davidson	Lexington	Lexington
Davidson	Thomasville	Thomasville
Davie	Mocksville	Davie

Appendix A: Community Hospitals Reporting Data		
County	Town	Hospital
Duplin	Kenansville	Duplin
Durham	Durham	Duke
Durham	Durham	Durham Regional
Edgecombe	Tarboro	Heritage
Forsyth	Winston-Salem	Forsyth
Forsyth	Winston-Salem	NCBH
Franklin	Louisburg	Franklin
Gaston	Gastonia	Gaston
Granville	Oxford	Granville
Guilford	High Point	High Point
Guilford	Greensboro	Moses Cone
Guilford	Greensboro	Wesley Long
Halifax	Roanoke Rapids	Halifax
Halifax	Scotland Neck	Our Community
Harnett	Dunn	Betsy Johnson
Haywood	Clyde	Haywood
Henderson	Hendersonville	Margaret Pardee
Henderson	Fletcher	Park Ridge
Hertford	Ahoskie	Roanoke Chowan
Iredell	Statesville	Davis
Iredell	Statesville	Iredell
Iredell	Mooresville	Lake Norman
Jackson	Sylva	Harris
Johnston	Smithfield	Johnston
Lee	Sanford	Central Carolina
Lenoir	Kinston	Lenoir
Lincoln	Lincolnton	Lincoln
Macon	Franklin	Angel
Macon	Highlands	Highlands
Martin	Williamston	Martin
McDowell	Marion	McDowell
Mecklenburg	Charlotte	CMC

Appendix A: Community Hospitals Reporting Data		
County	Town	Hospital
Mecklenburg	Charlotte	CMC Mercy
Mecklenburg	Charlotte	CMC Pineville
Mecklenburg	Charlotte	CMC University
Mecklenburg	Charlotte	Presbyterian
Mecklenburg	Huntersville	Presbyterian Huntersville
Mecklenburg	Matthews	Presbyterian Matthews
Mitchell	Spruce Pine	Blue Ridge Regional
Montgomery	Troy	FHS Montgomery
Moore	Pinehurst	FHS Moore
Nash	Rocky Mount	Nash
New Hanover	Wilmington	New Hanover
Onslow	Jacksonville	Onslow
Orange	Chapel Hill	UNC Hospitals
Pasquotank	Elizabeth City	Albemarle
Pender	Burgaw	Pender
Person	Roxboro	Person
Pitt	Greenville	Pitt
Polk	Columbus	St Luke
Randolph	Asheboro	Randolph
Richmond	Rockingham	FHS Richmond
Richmond	Hamlet	Sandhills
Robeson	Lumberton	Southeastern
Rockingham	Reidsville	Annie Penn
Rockingham	Eden	Morehead
Rowan	Salisbury	Rowan
Rutherford	Rutherfordton	Rutherford
Sampson	Clinton	Sampson
Scotland	Laurinburg	Scotland
Stanly	Albemarle	Stanly
Stokes	Danbury	Stokes Reynolds
Surry	Elkin	Hugh Chatham
Surry	Mt. Airy	Northern Surry

Appendix A: Community Hospitals Reporting Data

County	Town	Hospital
Swain	Bryson City	Swain
Transylvania	Brevard	Transylvania
Union	Monroe	Union
Vance	Henderson	Maria Parham
Wake	Raleigh	Duke Raleigh
Wake	Raleigh	Rex
Wake	Apex	WakeMed Apex
Wake	Cary	WakeMed Cary
Wake	Raleigh	WakeMed North
Wake	Raleigh	WakeMed Raleigh
Washington	Plymouth	Washington
Watauga	Blowing Rock	Blowing Rock
Watauga	Boone	Watauga
Wayne	Goldsboro	Wayne
Wilkes	North Wilkesboro	Wilkes
Wilson	Wilson	Wilson
Yadkin	Yadkinville	Hoots

Appendix B: Data Source

What is NC-DETECT?

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) is the Web-based early event detection and timely public health surveillance system in the North Carolina Public Health Information Network. NC DETECT uses the CDC's CUSUM algorithms from the Early Aberration Reporting System (EARS) to monitor several data sources for suspicious patterns. The reporting system also provides broader public health surveillance reports for emergency department visits related to hurricanes, injuries, asthma, vaccine-preventable diseases, occupational health and others.

Who develops and manages NC-DETECT?

Staff at the UNC Department of Emergency Medicine (UNC DEM), under contract to the North Carolina Division of Public Health (NC DPH) develop and manage NC DETECT. UNC DEM collaborates with NC DPH on all aspects of NC DETECT development.

How is NC DETECT related to NCHESS?

Data from the North Carolina Hospital Emergency Surveillance System (NCHESS) are loaded into NC DETECT (which was formerly known as the North Carolina Bioterrorism and Emerging Infection Prevention System, NC BEIPS). The NC DETECT team at the UNC Department of Emergency Medicine monitors the quality of the NCHESS data and work with hospitals, their vendors and the North Carolina Hospital Association (NCHA) to ensure NC DETECT users have access to the most accurate data possible.

How have North Carolinians benefited from NC DETECT?

With NC DETECT, public health officials at the local, regional and state levels are able to monitor a variety of important public health issues in a secure and timely fashion, including influenza, post-hurricane health issues, injury and violence, and vaccine-preventable disease surveillance. For example, NC DETECT users have monitored illness and injury effects after hurricanes Isabel and Ophelia, analyzed ED use at select hospitals by Katrina evacuees, and uncovered unreported cases of tuberculosis. Before NC DETECT, similar surveillance was either simply not performed, relied on manual, redundant data entry, or had a considerable time lag. A summary of specific NC DETECT outcomes is also available. Since NC DETECT is designed to uncover suspicious patterns of illness in both human and animal populations, it is a key tool in the early detection of emerging infectious diseases, such as new strains of influenza.

Who pays for NC DETECT?

NC DETECT is funded from federal bioterrorism grants administered through the Centers for Disease Control and Prevention and disbursed by the North Carolina Department of Health and Human Services, Division of Public Health.

For more Information: ncdetect@listserv.med.unc.edu, (919) 843-2361

Appendix C: ICD-9 codes

ICD-9 codes that are used to categorize each of the three disabilities are listed below. The International Statistical Classification of Diseases and Related Health Problems (most commonly known by the abbreviation ICD) provides codes to classify diseases and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease.

ICD-9 Code Grouping	Description of Category
Mental Health	
290.00- 290.99	Dementia/Delusional psychosis
293.00-293.99	Organic delirium/delusions
294.00-294.99	Dementia/Organic brain syndrome
295.00-295.99	Schizophrenia
296.00-296.99	Manic depressive disorder
297.00-297.99	Paranoia
298.00-298.99	Unspecified psychosis
299.00-299.99	Childhood psychosis
300.00-300.99	Neurotic disorders
301.00-301.99	Personality disorder
302.00-302.99	Psychosexual disorders
306.00-306.99	Physiological malfunction from mental disorders
307.00-307.99	Sleeping order/eating disorder
308.00-308.99	Predominant emotional disturbance
309.00-309.99	Brief/prolonged depressive reaction
310.00-312.99	Conduct disorder
313.00-314.99	Emotional disturbance of childhood or adolescence
799.9	Other MH /unknown/unspecified
995.50-995.89	Child/adult abuse/neglect

ICD-9 Code Grouping	Description of Category
Substance Use and Abuse	
292.00-292.99	Drug induced psychosis
304.00-304.99	Drug dependence
305.20-305.99	Drug abuse
291.00-291.99	Alcohol-related psychosis
303.00-303.99	Alcohol dependence
305.00-305.03	Alcohol abuse
Developmental Disabilities	
315.00-315.99	Developmental disabilities
V79.0-V79.9	Range of DD early childhood/DD- unspecified
314.01	Hyperkinesias with DD
740-759	Congenital anomalies
317.00	Mild mental retardation
318.00	Moderate mental retardation
318.10	Severe mental retardation
318.20	Profound mental retardation
319.00	Mental retardation, severity unspecified

The DMH/DD/SAS Mental Health, Developmental Disabilities and Substance Abuse Related Admissions in Community Emergency Departments, Quarterly Report is published four times a year.

All reports are available on the Division's website:

<http://www.ncdhhs.gov/mhddsas/statspublications/reports/>

Questions and feedback should be directed to:

NC DMH/DD/SAS Quality Management Team

ContactDMHQuality@dhhs.nc.gov

Or

(919) 733-0696